Research and Development

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Proceedings: Second Annual Acid Deposition Emission Inventory Symposium (November 1985)

J.B. Homolya and P.A. Cruse

The 2-day symposium discussed progress made by the National Acid Precipitation Assessment Program and other organizations in the development of emission inventories. The symposium was sponsored by EPA's Air and Energy Engineering Research Laboratory, in cooperation with EPA's Office of Air Quality Planning and Standards, the U.S. Department of Energy, the National Oceanic and Atmospheric Administration, and the National Acid Precipitation Assessment Program. The meeting was intended primarily for government, academic, and private sector individuals involved in the development or use of emission inventories for acid deposition. Topics addressed at the meeting included historical emissions estimates, the 1980 and 1985 emission inventories, Eulerian modeling analyses, and uncertainties in emission inventories. The proceedings provide valuable documentation of results of efforts to date to develop emission factors and emission inventories for anthropogenic and natural sources.

This Project Summary was developed by EPA's Air and Energy Engineering Research Laboratory, Research Triangle Park, NC, to announce key findings of the research project that is fully documented in a separate report of the same title (see Project Report ordering information at back).

The Symposium

The Second Annual Acid Deposition **Emission Inventory Symposium was** held in Charleston, SC, November 13-14, 1985. The purpose of the meeting was to discuss progress made by the National Acid Precipitation Program (NAPAP) in development of emission inventories for use in acid deposition research. EPA's Air and Energy Engineering Research Laboratory sponsored the symposium with support from EPA's Office of Air Quality Planning and Standards, DOE, NOAA, and NAPAP. The 72 attendees included representatives of EPA, DOE, NOAA, state air pollution control agencies, several universities, and the private sector.

The symposium consisted of five sessions. Robert Friedman, Office of Technology Assessment, U.S. Congress, delivered the keynote address on regulatory and legislative needs related to emission inventories. Session chairmen and speakers were:

Welcome and Introduction

Michael A. Maxwell, EPA Air and Energy Engineering Research Laboratory

Session 1: Development of **NAPAP Emission** Inventories for Anthropogenic Sources

Ed Trexler Chairman DOE, Office of Fossil Energy

Overview of NAPAP Emissions Inventory Activities for Anthropogenic Sources

J. David Mobley, EPA
Air and Energy Engineering
Research Laboratory (Speaker),
Dale Pahl, and Frederick Sellars

Assessment of the Final 1980 NAPAP Emissions Inventory

Douglas Toothman Engineering-Science

Development of the NAPAP Utility Reference File

Edward Pechan, E.H. Pechan and Associates (Speaker), James Wilson, and Kristin Graves

Development of an Emissions Inventory to Support Testing of the Eulerian Regional Acid Deposition Model

Frederick Sellars GCA/Technology Division

Uncertainty Analysis of NAPAP Emissions Inventory

Carmen Benkovitz, Brookhaven National Laboratory

Session 2: Development of NAPAP Emission Inventories for Anthropogenic Sources (continued)

John Bosch, EPA, Office of Air Quality Planning and Standards, Chairman

Application of the NAPAP Emission Inventories to Eulerian Modeling

Joan Novak, EPA, Atmospheric Sciences Research Laboratory (Speaker), and Paulette Middleton

Historic Emissions of SO₂ and NO_x Since 1900 by Stack Height Range and by Season

Gerhardt Gschwandtner, Pacific Environmental Services Development of Monthly Emissions Trends for Recent Years, Duane Knudson, Argonne National Laboratory

Application of Historic Emissions Inventories to the Development of the 1984 Acid Deposition Assessment

Paul Schwengels, EPA, Office of Air and Radiation

Overview of the Development of the 1985 NAPAP Inventory

Charles Mann, EPA, Office of Air Quality Planning and Standards

Assistance to the States in the Development of the 1985 NAPAP Emissions Inventory

David Johnson, EPA, Office of Air Quality Planning and Standards (Speaker), and Mark Hodges

Session 3: Formulation of Man-Made Pollutant Emission Factors

Dale Pahl, EPA, Air and Energy Engineering Research Laboratory, Chairman

Development of NAPAP Emission Factors for Anthropogenic Sources

Jim Homolya, Radian

Size-Selective Particulate Emission Factors for Emission Inventories

Frank Noonan, EPA, Office of Air Quality Planning and Standards

Field Measurement Studies for the Development of Point Source Emission Factors

James Ekmann, DOE, Pittsburgh Energy Technology Center

VOC Composition of Automotive Exhaust and Solvent Usage in Europe

C. Veldt, TNO (Netherlands Organization for Applied Scientific Research), Division of Technology

Session 4: Development of Emission Inventories for Natural Sources

Fred Fehsenfeld NOAA, Aeronomy Laboratory, Chairman

Measurement of Biogenic Sulfur Fluxes at Three Sites in the Eastern United States

Paul Goldan, NOAA, Aeronomy Laboratory (Speaker), W.C. Kuster, F.C. Fehsenfeld, and D.L. Albritton

Determination of Nitrogen Emissions from Natural Sources

Fred Fehsenfeld NOAA, Aeronomy Laboratory (Speaker), E.J. Williams, and D.D. Parrish

Alkaline Aerosols Emissions

Dale Gillette, NOAA, Air Resources Laboratory

Methodology for Estimating Natural Hydrocarbon Emissions

James Reagan, EPA Atmospheric Sciences Research Laboratory

Session 5: Related Emission Inventory Development Activities

J. David Mobley, EPA, Air and Energy Engineering Research Laboratory, Chairman

Summary of a 1982 National Emissions Inventory for Regional Model Development

Steve Heisler, Environmental Research and Technology

Generation of Temporally-Resolved Emission Inventories for Canada

Trevor Scholtz, MEP Company (Speaker), and Frank Vena

Historical Analysis of Sulfur Dioxide and Nitrogen Oxide Emissions in Canada

Tom Furmanczyk, Environment Canada (presented by Frank Vena)

United Kingdom Emission Inventories

Simon Eggleston, Warren Spring Laboratory

The proceedings contain copies of the papers as supplied by the authors and presenters. The proceedings provide a timely publication of results to date for studies to develop emission factors and emission inventories for anthropogenic and natural sources.

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J. David Mobley is the EPA Project Officer (see below).

The complete report, entitled "Proceedings: Second Annual Acid Deposition Emission Inventory Symposium (November 1985)," (Order No. PB 86-217 148/AS; Cost: \$22.95, subject to change) will be available only from:

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Telephone: 703-487-4650

The EPA Project Officer can be contacted at:

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